

REMARKS

Claims 1-16 are pending in the application upon entry of the amendments. Claims 1, 3, 4, 13, and 14 have been amended for consistency and to better describe certain aspects of the invention. Claims 17-20 have been added to further describe the invention. Favorable reconsideration in light of the amendments and the remarks which follow is respectfully requested.

The Amendments

Claims 1, 13 and 14 have been amended to better describe the invention. Specifically, the relationship between the diffraction-limited parameter of an image transfer medium (such as a lens or set of lenses) and the projected pixels size in the object field of view is better described. Claims 3 and 4 have been amended to clarify what the component is comprised of within the context of the invention.

The Indefiniteness Rejection

Claims 3 and 4 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 3 and 4 have been amended to clarify what the component is comprised of within the context of the invention. Claims 3 and 4 are now understandable to one skilled in the art.

The Novelty Rejection

Claims 1-2, 5-7, 10, and 13-16 have been rejected under 35 U.S.C. § 102(e) over Blumenfeld et al. Blumenfeld et al relates to detecting patterns of DNA hybridization on a DNA chip. Excitation radiation is directed to a DNA chip with an array of DNA spots, the spots then emit light through an optional lens, the light is then collected by pixels of a CMOS detector.

To establish anticipation, each and every claim feature must be disclosed in a single cited art document. Claim 1 requires an imaging system containing an image

transfer medium having a diffraction-limited parameter adapted to the receptor pitch parameter such that the diffraction-limited parameter in an object field of view is approximately matched to a projected receptor pitch parameter in the object field of view, and an application program that analyzes critical dimensions of a structure from the image and stores the output of the image of the feature in a memory. Blumenfeld et al fails to disclose several features of claim 1.

Blumenfeld et al fails to disclose, teach, or suggest an image transfer medium having a diffraction-limited parameter adapted to the receptor pitch parameter such that the diffraction-limited parameter in an object field of view is approximately matched to a projected receptor pitch parameter in the object field of view. Columns 5 and 6 of Blumenfeld et al mentions matching a DNA spot size with a pixel/group of pixels. The DNA chip contains an array of DNA spots, each DNA spot is a site of DNA deposition which is imaged to determine if hybridization occurs. A diffraction limited spot is a parameter of an image transfer medium, such as a lens. The diffraction limited spot represents the smallest resolvable feature capable of being imaged by the lens. A DNA spot and the diffraction limited spot of an image transfer medium are completely different, not equivalent, and not interchangeable. Blumenfeld et al fails to disclose, teach, or suggest the diffraction limited spot size of the lens it employs (in fact, as shown by Figure 3A, a lens is NOT even required in the device of Blumenfeld et al). Since Blumenfeld et al does not disclose each and every feature of claim 1, Blumenfeld et al cannot anticipate claims 1-2, 5-7, and 10.

Blumenfeld et al also fails to disclose, teach, or suggest an application program that analyzes critical dimensions of a semiconductor structure and stores the output of the image of the feature in a memory. The device of Blumenfeld et al detects DNA hybridization. However, detecting DNA hybridization is NOT equivalent nor interchangeable with analyzing critical dimensions of a structure. One skilled in the art would not have been motivated to analyze critical dimensions of a structure based on a teaching to detect DNA hybridization. The device of Blumenfeld et al transmits and

displays the image. However, Blumenfeld et al also fails to disclose an application program that stores the output of the image of the feature in a memory.

For these additional reasons, Blumenfeld et al cannot anticipate claims 1-2, 5-7, and 10.

Claim 13 requires a digital image containing an image transfer medium having a diffraction-limited spot size in an object plane matched to about a projected pixel size in an object plane. Blumenfeld et al fails to disclose, teach, or suggest a digital image system containing an image transfer medium having a diffraction-limited spot size in an object plane matched to about a projected pixel size in an object plane. This is because Blumenfeld et al fails to discuss the diffraction-limited spot size of it lens in the object plane and its projected pixel size in the object plane. In addition to mentioning these two parameters, Blumenfeld et al fails to disclose approximately matching the two parameters in the object plane (which is not the image plane, at the surface of the detector). As thoroughly discussed above, a DNA spot and the diffraction limited spot of an image transfer medium are NOT the same. Blumenfeld et al fails to disclose several features of claim 13.

Claim 14 requires a machine vision system for collecting image date on a pixelated sensor through an image transfer device, where the projected pixel have a size in the object plane approximately matched with diffraction-limited spot size of the image transfer medium in the object plane. Blumenfeld et al fails to disclose, teach or suggest a method involving collecting image data on a pixelated sensor through an image transfer device, where the projected pixel have a size in the object plane approximately matched with diffraction-limited spot size of the image transfer medium in the object plane. Since Blumenfeld et al does not disclose each and every feature of claim 14, Blumenfeld et al cannot anticipate claims 15 and 16.

The Obviousness Rejections

Claims 8-9 have been rejected under 35 U.S.C. § 103(a) over Blumenfeld in view of Schaeffer et al. Schaeffer et al relates to a mobile telephone system having a detachable camera/battery module. Schaeffer et al fails to cure the fundamental deficiencies of Blumenfeld et al. More specifically, Schaeffer et al fails to teach or suggest an image transfer medium having a diffraction-limited parameter adapted to the receptor pitch parameter such that the diffraction-limited parameter in an object field of view is approximately matched to a projected receptor pitch parameter in the object field of view. Withdrawal of the rejection is therefore respectfully requested.

Claims 11-12 have been rejected under 35 U.S.C. § 103(a) over Blumenfeld et al. Due to the fundamental deficiencies of Blumenfeld et al (Blumenfeld et al fails to teach or suggest an image transfer medium having a diffraction limited parameter adapted to the receptor pitch parameter such that the diffraction limited parameter in an object field of view is approximately matched to a projected receptor pitch parameter in the object field of view), cannot render claims 11-12 obvious.

Petition for Extension of Time

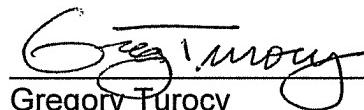
A request for a three month extension of time is hereby made (small entity status has been established). Payment is being made through the EFS electronic filing system.

Should the Examiner believe that a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

In the event any fees are due in connection with the filing of this document, the Commissioner is authorized to charge those fees to our Deposit Account No. 50-1063.

Respectfully submitted,

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